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IMPLEMENTATION PLAN REVIEW FOR SOUTH CAROLINA AS REQUIRED BY THE ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

Environmental Protection Agency

Prepared for:

Argonne National Laboratory

March 1975

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IMPLEMENTATION PLAN REVIEW

FOR

SOUTH CAROLINA

AS REQUIRED

BY

THE ENERGY SUPPLY

AND

ENVIRONMENTAL COORDINATION ACT

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16. ABSTRACT

Section IV of the Energy Supply and Environmental Coordination Act of 1974, (ESECA) requires EPA to review each State Implementation Plan (SIP) to determine if revisions can be made to control regulations for stationary fuel combustion sources without interfering with the attainment and maintenance of the national ambient air quality standards. This document, which is also required by Section IV of ESECA, is EPA's report to the State indicating where regulations might be revised.

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REQUIRED BY THE ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

PREPARED BY THE FOLLOWING TASK FORCE:

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IMPLEMENTATION PLAN REVIEW

FOR

SOUTH CAROLINA

REQUIRED BY THE ENERGY SUPPLY AND ENVIRONMENTAL COORDINATION ACT

1.0 EXECUTIVE SUMMARY

The enclosed report is the U.S. Environmental Protection Agency's (EPA's) response to Section IV of the Energy Supply and Environmental Coordination Act of 1974 (ESECA). Section IV requires EPA to review each State Implementation Plan (SIP) to determine if control regulations for stationary fuel combustion can be revised without interfering with the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). In addition to requiring that EPA advise the state as to whether control regulations can be revised, ESECA provides that EPA must approve or disapprove any revised regulations relating to fuel burning stationary sources within three months after they are submitted to EPA by the states. The states may, as under the Clean Air Act of 1970, initiate State Implementation Plan revisions; ESECA does not, however, require states to change any existing plan.

Congress has intended that this report provide the state with information on excessively restrictive control regulations. The intent of ESECA is that SIPs, wherever possible, be revised in the interest of conserving low-sulfur fuels or converting to coal, sources which burn oil or natural gas. EPA's objective in carrying out the SIP reviews, therefore, has been to try to determine if emissions from certain combustion sources may be increased without interfering with the attainment and maintenance of standards. If so, it may be possible through altered resource allocations to effect significant "clean fuel savings" in a manner consistent with both environmental and national energy needs.

In many respects, the ESECA SIP reviews parallel the implementation of EPA's policy on clean fuels. Under the Clean Fuels Policy, implementation plans have been reviewed with a view to saving low sulfur fuels. Where the primary sulfur dioxide air quality standards will not be exceeded, states have been encouraged to either defer attainment of secondary standards or to revise

the SO_2 emission regulations. The states have also been asked to discourage large-scale shifts from coal to oil where this could be done without jeopardizing the attainment and maintenance of the NAAQS.

To date, this activity has involved only those states with the largest clean fuels saving potentials. Several of these states have revised or are currently in the process of revising their SO_2 regulations. These states are generally in the eastern half of the United States. ESECA, however, requires the analysis of potentially over-restrictive regulations in all 55 states and territories. In addition, the current reviews address the attainment and maintenance of all the National Ambient Air Quality Standards.

The adoption of emission limitations which may, in some areas of the state, be overly restrictive (or not restrictive enough) resulted largely from the use of the "example region" approach along with analyses which considered the "hot spots" of an Air Quality Control Region (AQCR) rather than the entire region. This type of approach was offered in EPA guidelines for plan development when states were preparing their original plans. Many states, through concurrence with EPA, adopted the example region approach, largely because of the short timetable dictated by the Clean Air Act. Also, in most cases, the original SIPs were designed to attain and maintain the original NAAQS, some of which have since been designated as "guides" only or actually rescinded. However, many states adopted and retained the original federal standards or, in a few cases, adopted more restrictive state standards, and these served as the bases on which their SIPs were approved. As a result, the requirements of many state plans conflict with legitimate national energy concerns, and thus a review of the State Implementation Plans is a logical follow-up to EPA's initial appraisal (1972) of the SIPs. At the time SIPs were approved by EPA if they demonstrated the attainment of the original NAAQS or the more stringent state air quality standards. Also, at that time an acceptable method for formulating control strategies was the use of an example region for demonstrating the attainment of the standards.

The example region concept permitted a state to identify the most polluted air quality control region and adopt control regulations which would be adequate to attain the NAAQS in that region. In using an example region, it was assumed that NAAQS would be attained in the other AQCRs of the state if the control regulations were applied to similar sources. But use of an example region can

result in excessive controls, especially in the utilization of clean fuels, for areas of the state where sources would not otherwise contribute to NAAQS violations. For example, a control strategy based on a particular region or source can result in a regulation requiring 1 percent sulfur oil to be burned statewide, even though the use of 3 percent sulfur coal would be adequate to attain NAAQS in some locations.

EPA anticipates that a number of states will use the review findings to assist them in deciding whether or not to revise portions of their State Implementation Plans. However, it is most important for such states to recognize the limitations of the present review. The findings of this report are by no means conclusive and are neither intended nor adequate to be the sole basis for SIP revisions; they do, however, represent EPA's best judgement and effort in complying with the ESECA requirements. The time and resources which EPA has had to prepare the reports has not permitted the consideration of growth, economics, and control strategy tradeoffs. Also, there has been only limited dispersion modeling data available by which to address individual point source emissions. Where the modeling data for specific sources was found, however, it was used in the analysis.

The data upon which the report's findings are based is the most currently available to the federal government. However, EPA believes that the states possess the best information for developing revised plans. The states have the most up-to-date air quality and emissions data, a better feel for growth, and the fullest understanding for the complex problems facing them in the attainment and maintenance of air quality. Therefore, those states desiring to revise a plan are encouraged to verify and, in many instances, expand the modeling and monitoring data used to support EPA's findings. States are encouraged to consider the overall impact which the potential relaxation of overly restrictive emissions regulations for combustion sources might have on their future control programs. This may include air quality maintenance, prevention of significant deterioration, increased TSP, NO_x, and HC emissions which occur in fuel switching, and other potential air pollution situations.

Although the enclosed analysis has attempted to address the attainment of all the NAAQS, most of the review has focused on total suspended particulate matter (TSP) and sulfur dioxide (SO_2) emissions. This is because stationary fuel combustion sources constitute the greatest source of SO_2 emissions and are a major source of TSP emissions.

The following are the principle findings for the State of South Carolina. (Air Quality Control Regions are displayed on Fig. 1-1.)

- The state has recently revised its emission regulations for fuel combustion sources. The new SO_2 regulations allow for an emission limit based on local conditions rather than regionwide considerations and in no case require the use of clean (< 1% sulfur) fuels.

- The state's ambient air quality standards are the same as the federal NAAQS.

- Within the framework of this review there does not appear to be any room for relaxing particulate regulations beyond their present limits. High particulate readings are being recorded throughout most of the state.

- No SO_2 violations of the NAAQS were reported in South Carolina and there are indications that the state could tolerate higher SO_2 emissions without ambient air quality problems.

- The power plant modeling results indicate that some facilities could use higher sulfur content fuel than is currently permitted; however, there are no clean fuels savings that would result from regulation revision. The sulfur content switch would be from the 2-3% sulfur range to the greater than 3% sulfur range and this is not significant from the perspective of current clean fuels supply/demand imbalances.

- The state has a periodic regulation review procedure and a variance procedure which could be used to adjust the regulations to any local conditions affecting air quality and/or fuel availability. There is, therefore, no reason for further regulation revision at this time.

- Virtually all power plants, industrial/commercial/institutional sources, and area sources had a fuel supply in 1971 (prior to SIP regulations) which would be in compliance with current regulations. The indication is, therefore, that this fuel is economically available to insure continued compliance.

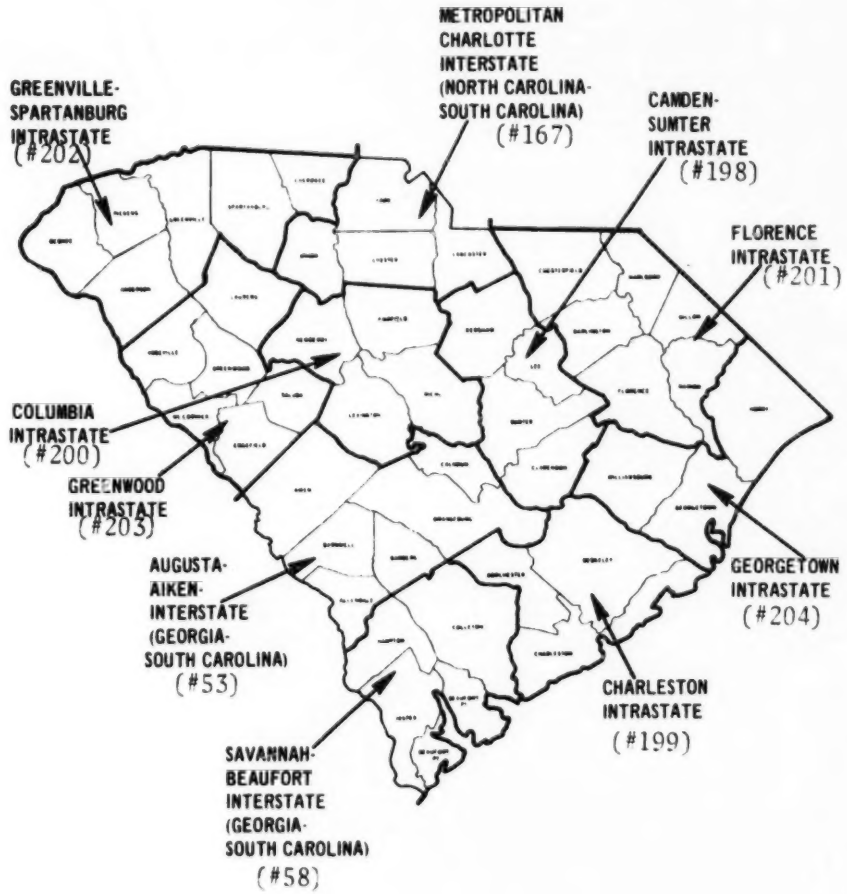

Figure 1-1. South Carolina Air Quality Control Regions (AQCRs)

2.0 SOUTH CAROLINA STATE IMPLEMENTATION PLAN REVIEW

2.1 Summary

A revision of fuel combustion source emissions regulations will depend on many factors. For example:

- Does the state have air quality standards which are more stringent than NAAQS?
- Does the state have emission limitation regulations for control of (1) power plants, (2) industrial sources, (3) area sources?
- Did the state use an example region approach for demonstrating the attainment of NAAQS or more stringent state standards?
- Has the state initiated action to modify combustion source emission regulations for fuel savings; i.e., under the Clean Fuels Policy?
- Are there proposed Air Quality Maintenance Areas?
- Are there indications of a sufficient number of monitoring sites within a region?
- Is there an expected 1975 attainment date for NAAQS?
- Based on (1973) air quality data, are there reported violations of NAAQS?
- Based on (1973) air quality data, are there indications of a tolerance for increasing emissions?
- Are the total emissions from stationary fuel combustion sources a relatively small portion of the regional total?
- Do modeling results for specific fuel combustion sources show a potential for a regulation revision?
- Is there a significant clean fuel savings potential in the region?
- Must the regulations be revised to accomplish significant fuels switching?

This SIP review has answered these questions based on an overall evaluation of EPA's current information. Based on these answers, each AQCR has been assessed as a good, marginal, or poor candidate for regulation relaxation. An AQCR is assessed as a good candidate if the air quality indicators show that the region has a tolerance to absorb increased emissions and if the source-

by-source evaluations show that significant clean fuels savings could be effected by such revision. If the air quality situation is such that no emission increase could be tolerated and/or if the source evaluations show little or no clean fuels savings potential, then the region is classified as a poor candidate for regulation revision. If the air quality or the clean fuels savings evaluations are inconclusive or show conflicting information, then the region is assessed as a marginal candidate for regulation revision and a more detailed analysis is needed to resolve the situation. Table 2-1 summarizes the conclusions of this State Implementation Plan Review and gives the overall candidacy assessment for each AQCR.

2.2 Air Quality Setting for the State of South Carolina

2.2.1 South Carolina Air Quality Control Regions

The State of South Carolina is divided into ten Air Quality Control Regions (AQCRs) as shown on Fig. 1-1. There are seven intrastate and three interstate regions. The largest populations are in Metropolitan Charlotte (#167), Greenville-Spartanburg (#202), and Augusta-Aiken (#53) as shown on Table 2-2. Population densities are also high in Charleston (#199) and Columbia (#200). Based on present conditions and growth projections for the state, portions of three counties in the state have been proposed as Air Quality Maintenance Areas (AQMAs) for particulates. They are Charleston and Berkley Counties in the Charleston AQCR (#199) and Greenville County in the Greenville-Spartanburg AQCR (#202).

2.2.2 South Carolina Ambient Air Quality Standards

As shown on Table 2-3, South Carolina has adopted the federal secondary annual NAAQS for particulates and a 24-hour standard slightly different than the federal primary NAAQS. For SO_2 and NO_2, the state has adopted all the current federal standards.

2.2.3 South Carolina Air Quality Status

Based on data in the Storage and Retrieval of Aerometric Data (SAROAD) data bank as of June, 1974, every region in the state with the exception of Augusta-Aiken (#53) and Greenwood (#203) is reporting particulate readings in excess of the NAAQS. In August-Aiken the 24-hour secondary standard is very close to a violation. Highest readings are being recorded in the Metropolitan Charlotte (#167), Charleston (#199), and Greenville-Spartanburg (#202) regions.

Table 2-1. State Implementation Plan Review Summary for South Carolina

"INDICATORS"	State		Augusta-Aiken[a] AQCR #53		Savannah[a] AQCR [illegible]8		Charlotte[a] AQCR #167		Camden-Sumter AQCR #198	
	TSP	SO_2	TSP	SO_2	TSP	SO_2	TSP	SO_2	TSP	SO_2
• Does the State have air quality standards which are more stringent than NAAQS?	NO	NO								
• Does the State have emission limiting regulations for control of: 1. Power plants 2. Industrial sources 3. Area sources	YES YES NO	YES YES NO								
• Did the State use an example region approach for demonstrating the attainment of NAAQS or more stringent State standards?	YES	YES								
• Has the State initiated action to modify combustion source emission regulations for fuel savings; i.e., under the Clean Fuels Policy?	YES	YES								
• Are there any proposed Air Quality Maintenance Areas?			NO	NO	NO	NO	NO	NO	NO	NO
• Are there indications of a sufficient number of monitoring sites within a region?			YES	YES	YES	YES	YES	YES	YES	YES
• Is there an expected 1975 attainment date for NAAQS?			YES	YES	YES	YES	YES	YES	YES	YES
• Based on (1973) Air Quality Data, are there any reported violations of NAAQS?			NO	NO	YES	NO	YES	NO	YES	NO
• Based on (1973) Air Quality Data, are there indications of a significant tolerance for increasing emissions?			NO	YES	NO	YES	NO	YES	NO	YES
• Are the emissions from stationary fuel combustion sources a relatively small portion of the regional total?			YES	NO	YES	YES	YES	YES	YES	NO
• Do modeling results for specific fuel combustion sources show a potential for a regulation revision?			N.A.	NO	N.A.	YES	N.A.	N.A.	N.A.	N.A.
• Is there a significant Clean Fuels Saving potential in the region?			NO		NO		NO		NO	
• Must the regulations be revised to accomplish significant fuel switching?			NO		NO		NO		NO	
• Based on the above indicators, what is the potential for revising fuel combustion source emission limiting regulations?			TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor	

Table 2-1. State Implementation Plan Review for South Carolina (Contd.)

"INDICATORS"	Charleston AQCR #199		Columbia AQCR #200		Florence AQCR #201		Greenville-Spartanburg AQCR #202		Greenwood AQCR #203		Georgetown AQCR #204	
	TSP	SO_2	TSP	SO_2	TSP	SO_2	TSP	SO_2	TSP	SO_2	TSP	SO_2
• Does the State have air quality standards which are more stringent than NAAQS?												
• Does the State have emission limiting regulations for control of: 1. Power plants 2. Industrial sources 3. Area sources												
• Has the State used an example region approach for demonstrating the attainment of NAAQS or more stringent State standards?							Example Region					
• Has the State initiated action to modify combustion source emission regulations for fuel savings; i.e., clean fuels policy?												
• Is area classified as Air Quality Maintenance Areas?	YES	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO
• Has there been installation of a sufficient number of monitoring sites within a region?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
• Is there an expected 1975 attainment date for NAAQS?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
• Based on 1974 air quality data, are there any reported violations of NAAQS?	YES	NO	YES	NO	YES	NO	YES	NO	NO	NO	YES	NO
• Based on 1974 air quality data, are there indications of a significant tolerance for increasing emissions?	NO	YES	NO	YES	NO	YES	NO	YES	YES	YES	NO	YES
• Are the emissions from stationary fuel combustion sources a relatively small portion of the regional total?	YES	NO	NO	NO	YES	NO	NO	NO	YES	NO	YES	NO
• Do modeling results for specific fuel combustion sources show a potential for a regulation revision?	N.A.	YES	N.A.	YES	N.A.	YES	N.A.	NO	N.A.	YES	N.A.	N.A.
• Is there a significant Clean Fuels Saving potential in the region?	NO		NO		NO		NO		NO		NO	
• Must the regulations be revised to accomplish significant fuel switching?	NO		NO		NO		NO		NO		NO	
• Based on the above indicators, what is the potential for revising fuel combustion source emission limiting regulations?	TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor		TSP - Poor SO_2 - Poor	

"Interstate

Table 2-2. South Carolina Air Pollution Control Areas

Air Quality Control Region	Federal Number	Demographic Information			Priority Classification			Proposed AQMA Designations[a]	
		Population 1970 (Millions)	Area (Square Miles)	Population Per Square Mile	Particulates	SO_x	NO_x	TSP Counties	SO_x Counties
Augusta-Aiken (Ga.)	53	.52	9,134	57	I	II	III	(0)	(0)
Savannah-Beaufort (Ga.)	58	.39	6,735	62	I	I	III	(0)	(0)
Metropolitan Charlotte (N.C.)	167	1.06	5,962	178	I	II	III	(0)	(0)
Camden-Sumter	198	.16	2,461	64	II	III	III	(0)	(0)
Charleston	199	.34	2,618	129	I	I	III	(2) Charleston[b], Berkley[b]	(0)
Columbia	200	.37	2,796	133	II	III	III	(0)	(0)
Florence	201	.26	3,515	75	III	III	III	(0)	(0)
Greenville-Spartanburg	202	.66	3,912	168	I	III	III	(1) Greenville[b]	(0)
Greenwood	203	.16	2,963	54	III	III	III	(0)	(0)
Georgetown	204	.14	2,901	48	II	III	III	(0)	(0)

[a]As of November 4, 1974.

[b]Only a portion of the county is in the proposed AQMA.

Table 2-3. South Carolina Ambient Air Quality Standards

All concentrations in $\mu gm/m^3$

		Total Suspended Particulate		Sulfur Oxides			Nitrogen Dioxide
		Annual	24-Hour	Annual	24-Hour	3-Hour	Annual
Federal	Primary	75 (G)	260[a]	80 (A)	365[a]	---	100 (A)
	Secondary	60 (G)	150[a]	---	---	1300[a]	100 (A)
State		60 (G)	250	80 (A)	365[a]	1300[a]	100 (A)

[a]Not to be exceeded more than once per year.

(A) Arithmetic mean
(G) Geometric mean

The 24-hour standard is presenting the greatest problem in all regions except Camden-Sumter (#198), Columbia (#200), and Georgetown (#204) which are having more difficulty with the annual standard. The indication is, therefore, that there is little possibility for relaxing particulate emission regulations without jeopardizing NAAQS attainment and maintenance.

No SO_2 violations were reported in any of the ten regions and no region is close to a violation. This indicates that there is margin for absorbing increased SO_2 emissions without NAAQS violations throughout the state limited, of course, to constraints imposed by special local conditions. This is encouraging from the perspective of the state being able to effect a clean fuels saving by permitting higher sulfur fuels to be burned at certain facilities.

2.2.4 South Carolina Emissions Summary

In the ten AQCR area, South Carolina fuel combustion sources account for about half of the SO_2 emissions and less than 20% of the particulate emissions. Of the three interstate regions, South Carolina sources contribute more than half the emissions only in Augusta-Aiken (#53). In Savannah-Beaufort (#58) and Metropolitan Charlotte (#167) South Carolina sources are responsible for no more than 30% of the regional total of particulate and SO_2 emissions.

Particulate emissions from South Carolina power plants, industrial/commercial/institutional fuel combustion sources, and area sources are of the same order of magnitude in all regions except Metropolitan Charlotte and Camden-Sumter (#198) which have no power plants. In all other regions none of the three source categories dominates the emission rate.

South Carolina power plants dominate the SO_2 emission rate in Savannah-Beaufort (#58), Charleston (#199), Columbia (#200), and Georgetown (#204). In Augusta-Aiken (#53) and Metropolitan Charlotte (#167) the industrial/commercial/institutional sources dominate. Area source fuel combustion emissions of SO_2 are significant only in Greenville-Spartanburg (#202). In the remaining three regions none of the source categories dominates.

2.3 Background on the Development of the Current State Implementation Plan

2.3.1 General Information

In January, 1972 the South Carolina Pollution Control Agency (PCA) submitted to EPA an implementation plan for the control of particulates and SO_2 in

accordance with Clean Air Act requirements. In August, 1972 the plan was resubmitted after corrections were made for errors which appeared in the original data base.

Since the August, 1972 submittal, the Pollution Control Agency determined that the SO_2 regulations were, in some cases, overly restrictive. This was based on more recent emission estimates compiled by the Department of Health and Environmental Control and on a reevaluation of the lead oxide method of measuring SO_2 concentrations as was used in the original plan submission. The PCA, therefore, decided that a further revision in the regulations was warranted. This revision was submitted to EPA in March, 1974.

2.3.2 Particulate Control Strategy

The particulate control strategy relied on the use of Greenville-Spartanburg as the example region. Calculations were performed using a proportional reduction model and it was assumed that the strategies were not applied to area sources. Evaluations of the regulations showed compliance with the NAAQS throughout the state. The fuel combustion regulations are summarized on Table 2-4 and Fig. 2-1.

2.3.3 Sulfur Dioxide Control Strategy

The SO_2 control strategy used the Metropolitan Charleston and Greenville-Spartanburg areas as the example regions. Calculations were performed with both the Air Quality Display Model (AQDM) and with a 24-hour power plant model. The regulations are summarized on Table 2-4.

As developed by the state, the regulations were designed to allow the greatest flexibility in adjusting to clean fuels availability and changing air quality. The designation of counties into each of the three categories is reviewed at no longer than three year intervals. In addition, the variance procedure allows the state the option of exempting specific facilities if appropriate supporting documentation is available.

2.3.4 Power Plant Modeling

With the assistance of the EPA Region IV office, the state conducted dispersion modeling studies for most of its power plants to determine maximum allowable emission rates. These were used to help classify some of the counties

Table 2-4. South Carolina Fuel Combustion Emission Regulations

Particulates

Fuel burning operations in use or under construction before February 11, 1971 and fuel burning operations constructed on or after February 11, 1971 shall use the appropriate portion of the graph on Fig. 2-1.

	Category:	Class I Counties		Class II Counties		Class III Counties
	Heat Input:	$\leq 10 \times 10^6$ Btu/hr	$> 10 \times 10^6$ Btu/hr	$< 1000 \times 10^6$ Btu/hr	$\geq 1000 \times 10^6$ Btu/hr	All Sources
	Emission Limit:	3.5 lbs/10^6 Btu	2.3 lbs/10^6 Btu	3.5 lbs/10^6 Btu	2.3 lbs/10^6 Btu	3.5 lbs/10^6 Btu
SO_2	Effective after Jan. 30, 1974	Class I Counties - Charleston Class II Counties - Aiken, Anderson Class III Counties - All others				

This classification is subject to periodic review and revision.

Exceptions:

1) If it can be demonstrated to the satisfaction of the S.C. Borad of Health and Environmental Control that ambient air standards will not be contravened by a source, alone or in combination with other sources, a greater allowance for SO_2 discharges will be made on a case by case basis in accordance with usual variance procedures.

2) Residences or dwellings of four families or less are exempt.

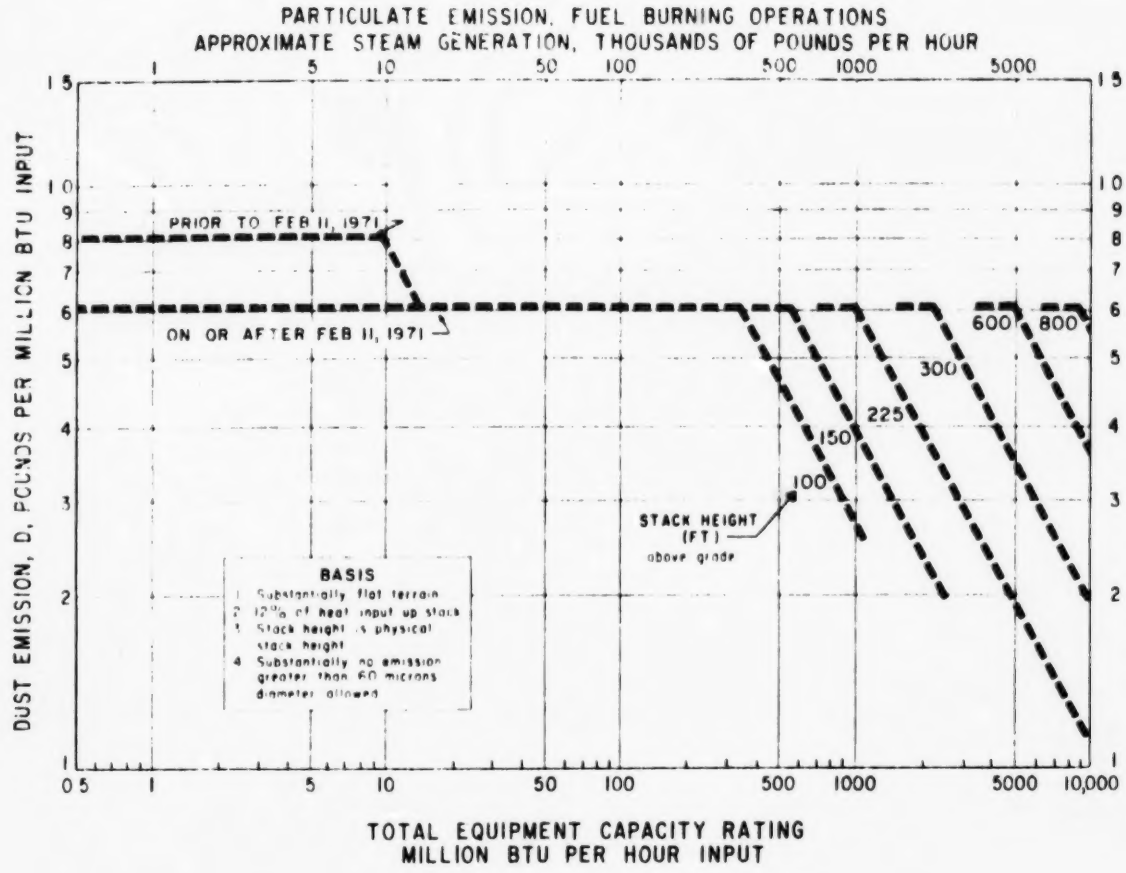

Fig. 2-1. South Carolina Particulate Emission Regulations

in the control regulation strategy. Table 2-5 summarizes the modeling results in terms of fuel sulfur content required. It is evident that the current regulations do not require any low sulfur (< 1%) fuel at all. In some cases the modeling indicates the possibility of allowing some shifts from a 2-3% sulfur fuel to a greater than 3% sulfur fuel. This is almost insignificant in terms of oil since a great deal of oil is less than 3% sulfur normally.

2.4 Special Considerations for the State of South Carolina

2.4.1 Planned SIP Revisions

South Carolina has just recently revised its SIP with respect to fuel combustion sources and in conjunction with the EPA Clean Fuels Policy.

2.4.2 Fuels

South Carolina is not a heavily industrialized state and hence is not a large consumer of fuels. In power plants coal is the dominant fuel accounting for 84% of the heat input while oil and gas accounted for 5% and 11%, respectively. Industrial/commercial/institutional sources rely more heavily on oil and gas with the split being 36% coal, 37% oil, and 27% gas. For area sources the fuel use is 2% coal, 51% oil, and 47% gas.

It is important to note also that virtually all power plants and industrial/commercial/institutional plants were using a fuel in 1971 (i.e., prior to the imposition of SIP regulations) that conforms to current regulations. The implication is that the necessary fuels are economically available to these facilities to insure continued compliance.

2.4.3 Fuel Conversions

The Federal Energy Administration has not identified any power plants in South Carolina as having oil or gas to coal conversion capability.

Table 2-5. South Carolina Power Plant Evaluation Summary

		Fuel Sulfur Content Required by Existing Regulations[a]				Fuel Sulfur Content Required by Modeling Results[b]			
	AQCR	< 1%	1-2%	2-3%	> 3%	< 1%	1-2%	2-3%	> 3%
53	Coal		314				314		
	Oil			78				78	
58	Coal			684					684
	Oil				549				549
167		No Power Plants							
198		No Power Plants							
199	Coal			644				644	
	Oil			255,438					255,438
200	Coal			1,179				408	771
	Oil				1,636				1,636
201	Coal			313					313
	Oil				1,517				1,517
202	Coal		922				922		
	Oil			21					
203	Coal			448				44	404
	Oil				3,439				
204	Coal			549				NA	
	Oil								
State	Coal		1,236	3,817			1,236	1,096	2,172
	Oil			255,516	7,141				259,140

[a]Fuel requirements based on 1971 fuel use pattern and added capacity. Coal quantity is 10^3 tons/yr, oil quantity is 10^3 gals/yr.

[b]Maximum allowable % S determined from power plant modeling data in the S.C. SIP. N.B. With the exception of 2 plants, all facilities had fuel available in 1971 which was well below current SIP requirements.